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ABSTRACT

A study was conducted in 1990-91 to explore the work values and job satisfaction of minority professionals in community colleges and technical institutes who aspire to advance in leadership positions. The sample consisted of 59 Black and Hispanic educators from community colleges and technical institutes across Texas who participated in the Leadership Development Program at Texas A&M University. Characteristics of these potential minority leaders were assessed using the Demographic Information Sheet, the Values Scale (VS) and the long form of the Minnesota Satisfaction Questionnaire (MSQ). Findings indicated that the participants valued advancement, altruism, authority, creativity, and personal development and were satisfied with the activity and social service aspects of their work more than the norm group with which they were compared. There were no real differences between Black and Hispanic or male and female participants, nor between participants with different amounts of professional experience. Study findings suggested that leadership development programs in community colleges did not need to be structured differently for minority participants. The VS and MSQ both seemed to be sufficiently reliable and valid to recommend their use in further research with potential minority leaders in community college settings. A 17-item bibliography and data tables derived from the VS, the MSQ, as well as a correlational analysis of the two, are attached. (JSP)

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THE RELATIONSHIP BETWEEN WORK VALUES AND JOB SATISFACTION FOR COMMUNITY COLLEGE LEADERSHIP TRAINEES: A REPLICATION AND CROSS-VALIDATION

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Abstract

The purpose of this study was to explore the work values and job satisfaction of minority professionals in community colleges and technical institutes who aspire to advancement in leadership positions. The sample consisted of 59 Black and Hispanic individuals in two samples participating in a minority leadership development program at Texas A&M University. The Values Scale and Minnesota Satisfaction Questionnaire were the instruments used. Findings indicate that five values exceeded the norm, there were no real differences between Black and Hispanic or male and female participants, and 15 relationships between values and satisfaction were replicated on two different samples. Both instruments employed appear to be appropriate and useful for research with minority educational leaders.

Introduction

Minorities, specifically Blacks and Hispanics, have been traditionally excluded from or underrepresented in administrative positions in colleges and universities (Bernstein, 1984; Garza, 1984; Harvard, 1986; Rivera, 1983; and Tinsley, 1985). Also, minority leadership is a subject that remains largely unexplored (National Commission on Excellence in Educational Administration, 1987).

In a study, Today's Academic Leaders in Community and Junior Colleges by Moore (1985), it was found that 92% of the administrators were White, 6% were Black, and 2% were Hispanic. These data clearly show that minority administrators are underrepresented in community college administrative positions. While research studies on women in two-year college administrative positions are scarce, there are even fewer studies on minority two-year college administrators (Moore, 1985).

A concern of community colleges is the lack of minority leaders. In their book, Shared Vision, Roeche, Baker, and Rose (1989) quote a section of the 1988 report by the Commission on the Future of Community Colleges which states "there is a clear pressing need to increase diversity among community college leadership. Blacks and Hispanics are underrepresented among all administrative and faculty groups."

Minority administrative leadership in the two-year college is clearly a subject worthy of additional research. Within the

last 30 to 40 years, community colleges have expanded their traditional function to include the interests and needs of the wider community (Barrera, 1984). They have attracted a more diverse population than the traditional university-bound student and serve people of more varied ages, background, ethnicity, and educational goals.

Faculty and administrative positions in community colleges need to be staffed by individuals reflecting the ethnic background of the students. Statistics illustrate that although community colleges have large percentages of minority students, neither administrative staff nor faculty reflect the percentages of these minorities (Garza, 1984).

During the late 1960's, leadership development programs were established in an effort to bring more minorities into the mainstream of American society and its educational institutions. National and state studies on the degree of minority participation in higher education have revealed that leadership programs focus on the development of higher educational management skills, not on learning about the characteristics of minority leaders. Also the programs are seldom evaluted during and/or after the training (Willie, 1984).

Leadership development programs may train potential minority administrators, but research needs to be conducted on leadership development programs for minorities to identify the characteristics of potential leaders. While this research could be

accomplished in a wide variety of ways, one approach could be to use measures of values and job satisfaction to profile potential minority leaders. Values are important factors in determining individual behavior and choices. More specifically, work values are important determinants of occupational choice and future goals (Super, 1970). An assessment of work values could provide useful information about why potential minority leaders choose a certain work environment. This information could also be used to encourage minorities to enter and/or advance in leadership positions.

Job satisfaction is assessed by measuring a worker's level of satisfaction with various job aspects or facets (Weiss, Dawis, England, and Lofquist, 1967). Both intrinsic and extrinsic factors are considered in the measurement of job satisfaction. What is known and learned about the job satisfaction of potential minority leaders could be used to change those factors within a job that can be changed, or for helping individuals accommodate those factors that are less subject to change.

The purpose of this research was to explore the work values and job satisfaction of minority professionals in community colleges and technical institutes who aspire to advancement in leadership positions. In addition, the study sought to determine the appropriateness of the work values and job satisfaction measures used for studies of this nature. Lastly, the study sought to replicate previous research and cross-validate the

specific work values found to be important in an earlier study (Torres & Kapes, 1990).

It was the purpose of this research to answer the following questions:

1) How do the work values and current job satisfaction of the minority sample studied compare to the national norms for:
   a) total sample,
   b) first year vs. second year fellows?
2) How do work values and job satisfaction relate to the demographic variables of ethnicity, gender, professional experience, and level of education for the total minority sample?
3) What is the relationship between work values and job satisfaction for the minority sample studied for:
   a) first year fellows,
   b) second year fellows?
4) What combinations of work values and demographic variables account for the maximum variance in job satisfaction for the total minority sample?

Method

Population and Sample

The population of interest in this research was Black and Hispanic educators employed in community colleges and technical institutes in Texas. The sample was drawn from two applicant pools for the Texas A&M Community College and Technical Institute Leadership Development Program (LDP). Each of the community

colleges and technical institutes in Texas, by campus, were given an opportunity to nominate two individuals to participate in the leadership project. There were 37 first year fellows (FYF) and 23 second year fellows (SYF) included in the study. First year Fellows participated in the leadership program from spring 1989 to summer 1990, while second year fellows participated in the leadership program from fall 1990 to summer 1991. These individuals held positions in community college settings ranging from instructors, counselors, and directors of various programs. Final selection to the LDP was based on the following: completed application, three letters of recommendation, and completion of two essay on leadership. Given the methods employed to identify these potential leaders, and the broad representation from across the state of Texas, the sample might be deemed broadly representative of a future minority leadership pool.

Instrumentation

Characteristics of the potential minority leaders were studied using demographic data, a work values instrument, and a job satisfaction instrument. The Demographic Information Sheet (DIS) was used to acquire self-report of the subjects' ethnicity, (Hispanic or Black) gender, number of years of professional experience, and level of education. The Values Scale (VS) was utilized as the measure of work values, and the long form of the Minnesota Satisfaction Questionnaire (MSQ) was utilized as the measure of job satisfaction.

The VS, which was developed out of the Work Importance Study by Nevill and Super (1981) measures intrinsic and extrinsic values. The instrument was created for national and cross-national use and is appropriate for adults and for studies of career development at various ages and with different cultural groups. Reliability for the VS as measured by the coefficient alpha ranged from .67 to .87 for adults. The VS's validity is supported by data on occupational differences, cultural differences, socialization, and life stages. In addition, factor analyses was conducted across age groups in the United States. The VS uses a 4 point scale which yields 21 separate values. The 21 values are reported in raw scores which can be converted to T scores with a mean of 50 and standard deviation of 10. The raw scores obtained for each of the 21 values were converted to standard scores using the tables provided in the test manual. The standard scores were based on a sample of adults in the United States.

The MSQ assesses an employee's job satisfaction in 20 job related areas. The authors of the Manual for the MSQ (Weiss, Dawis, England, & Lofquist, 1967) recommend using the long form since the 15-20 minutes required to complete the instrument is a relatively short period of time and it provides more information than the short form. The MSQ uses a five point Likert scale for 100 items with five items representing each of the 20 scale scores. The total general satisfaction score (which uses one item from each of the 20 factors and can range from 20 to 100)

and all 20 scale scores were used in this study. The long form of the MSQ has reliability coefficients ranging from .59 to .97, and has been validated by numerous research studies.

Research Design and Procedure

The instruments were administered to the 37 first year Fellows during the July 1989 Summer Institute of the Texas A&M LDP. Although there were 37 individuals, 36 chose to take part in the study and one chose the option of not participating. The 23 second year Fellows were administered the instruments during the fall 1990 program orientation. Thus, 59 of the 60 Fellows were included in the study.

To answer question 1, descriptive statistics were used to create a profile of the work values and the current level of job satisfaction. Means and standard deviation for all variables are provided for the total sample as well as FYF and SYF.

To answer question 2, all work values and the job satisfaction scales were related to the moderator variables of ethnicity, gender, professional experience, and level of education using t-tests or correlations for the total sample.

To answer question 3, correlation coefficients were computed between each work value and each MSQ scale score for FYF and SYF.

To answer question 4, a general linear model was used to determine the amount of variance accounted for in the dependent variables using the moderator and values variables for the total sample.

Results

Question one concerned the work values and job satisfaction for the total minority sample under study as well as the FYF and SYF. The data necessary to answer this question is provided in the first column of Tables 1 and 2. From Table 1, which reports the results for the Values Scale (VS), it can be seen

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Insert Tables 1 and 2 about here

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that all but one of the values were responded to as above average in importance since all the scores are above the T mean score of 50. Those values which are equal to or greater than a .5 standard deviation over the mean (T=55) are marked in the table with a + sign. Using this criteria, 5 of the 21 values could be considered high. The 5 highest numerical values in ascending order are: Advancement, Authority, Creativity, Altruism, and Personal Development.

The results of the Minnesota Satisfaction Questionnaire (MSQ) analysis are reported in Table 2. Using the criterion of a .5 standard deviation over the test-manual norms for employed non-disabled adults, two needs appear to more satisfied for this sample: Activity and Social Service. In absolute terms, the five most satisfied needs for this sample were: Social Service, Activity, Moral Values, Achievement, and Independence. The total score for the MSQ also appears at the bottom of Table 2. The mean score reported (73.7) is less than the average for employed

non-disabled adults ($\bar{X}$ = 77.86).

The second part of question number 1 deals with the difference beween the first year Fellows (FYF) and the second year Fellows (SYF). The data for this question is also presented in Tables 1 and 2 in the right hand columns. The VS data presented in Table 1 reveals that the two groups differed on only one of the 21 values and in this case the FYF valued Autonomy less than the SYF. The MSQ data is presented in Table 2 and indicates that both groups held significantly greater satisfaction with Advancement. The MSQ total general satisfaction difference between the FYF and SYF is also presented at the bottom of Table 2. From the table, it can be seen that the SYF had lower current total job satisfaction; however, this difference was not more than could be expected by chance at the .05 level.

The first and second parts of question 2 concern ethnic and gender differences on the work value instruments and on job satisfaction as measured by the MSQ. The first two columns of Tables 3 and 4 contain the data necessary to answer these parts of the question. From an examination of the ethnicity and gender

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Insert Tables 3 and 4 about here

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data in each table, it can be seen that only one difference exists for the ethnic comparisons, while there are five differences in gender comparisons. Given the few differences

found in the large number of comparisons, it may be appropriate to conclude that only the gender differences that exceeded the .01 level should be interpreted as real differences. Using this standard, females scored higher on Ability Utilization (MSQ).

The last two parts of question 2 concerned the relationship between professional experience and level of education of the sample and scores on the work values instrument and the job satisfaction measure. The data for this analysis are presented as Pearson product-moment correlations on the right hand side of Tables 3 and 4. From the table, it can be seen that for professional experience, only three of 42 comparisons yielded relationships that exceeded the probability of a .05 chance occurrence. The only relationship significant on the VS was Aesthetics while Advancement and Social Service were significant on the MSQ. If one chooses to interpret these relationships as real, it could be concluded that for this sample (and the populations which they represent) there is a tendency for those with greater professional experience to value Aesthetics more and be more satisfied with Advancement, and Social Service aspects of their work.

For the relationship between level of education and work values, only two exceeded a .05 chance occurrence. In both cases, those who had more education tended to be more satisfied with Responsibility and Social Service aspects of their work.

The third question examines the relationship between each work value and each MSQ scale score. A simple correlational

analysis was used to answer this question separately for the FYF and SYF samples. The relationships between each work value on the VS and each MSQ scale are seen in Table 5 for both samples.

Insert Table 5 about here

Because the sizes for each sample were relatively small (N = 36 & 23) and all statistically significant relationships were positive, it was decided to use the liberal .10 level to examine relationships that could be cross-validated between the two samples. Using this approach, significant relationship for the FYF sample (r=.27) are indicated by a single asterisk (*), for the SYF sample (r=.34) by a double asterisk (**), and for both samples with a triple astrisk (***). At the bottom and right side of the tables are the total number of significant relationships (hits) for either sample and for both samples. Also presented in the table at the left side and top are the median correlation for the entire sample (N = 59). From examining this table it can be seen that a total of 24 hits were obtained in either the FYF or SYF sample. However, of these, only 15 are double hits; that is, they occurred in both samples. Those work values which were consistantly related to one or more of the satisfaction scales were: Achievement, Advancement, Aesthetics, Altruism, Authority, Economic Rewards, Professional Development, Variety, and Cultural Identity. Also, the Satisfaction scales that were consistently related to one or more

of the work values were: Ability Utilization, Achievement, Advancement, Company Policies and Practices, Co-Workers, Independence, Moral Values, Recognition, Responsibility, Supervision-Human Relations and Supervision-Technical.

The fourth question concerns the combinations of work values and demographic variables that accounted for the maximum variance in job satisfaction. A multiple regression full and stepdown analysis were computed using all work values and demographic variables to predict satisfaction. Table 6 shows the results for the multiple regression analysis.

Insert Table 6 about here

From the table, the number of hits for the dependent variables, (MSQ scales--Abi to WC) can be seen vertically, while the number of hits for the independent (VS--AU to ES) and moderator (Ethnicity to Level of Education) variables are shown horizontally. The number of hits observed (with regression coefficients significant at $p < .10$ level) for the independent and moderator variables are shown after the last column. The symbols used to represent the significance level for the hits are described beneath the table.

At the bottom of the table, the first two rows report the multiple regression results for the full 26 variable model, and and the significance of R^2 for the full model. A hyphenated line separates the results for the stepdown analysis. The first row

the hypenated line reports the R^2 for each of the restricted model on each dependent variable. The second row (k variables) reports the number of the variables that remained in the stepdown models. The last row reveals that all the restricted models were significant at the .01 level.

It can be seen from the table that the R^2 for the full model ranged from .37 (Autonomy) to .61 (Recognition), while the R^2 adjusted values ranged from .12 (Creativity) to .53 (Co-Workers). Only four of the dependent variables (Recognition, Activity, Moral Values and Independence) were found to yield significant R^2 at the following levels: .03,.04,.08, and .09.

For the stepdown models, R^2 restricted values ranged from a low of .12 (Creativity) to a high of .53 (Recognition). The minimum number of variables necessary for a model is two (Creativty), and the maximum number of variables is nine (Activity).

To select the important unique variables that predict satisfaction, a cutoff of five or more hits was arbritarily chosen. If the independent variables are examined by group (VS amd moderator variables), it can be seen that eight of the VS variables had five or more hits across the dependent variables. The VS variables with five or more hits were: Achievement, Aesthetics, Autonomy, Economic Rewards, Life Style, Physical Activity, Risk, and Cultural Identity. As for the moderator variables, Gender had 10 hits while Professional Experience had five hits across the dependent variables. Thus, a total of ten

independent and moderator variables appear to be important factors related to job satisfaction for this sample.

Conclusions

The study examined work values and job satisfaction of potential minority leaders with respect to four specific questions. The first question concerned the work values and job satisfaction for the minority sample under study. The minorities who were included in this study differed from the norm group on five selected work values. They appear to value Advancement, Altruism, Authority,Creativity, and Personal Development and he satisfied with Activity and several Social Services aspects of their work than the norm group with which they were compared. Also, replication with the FYF and SYF samples yielded only two differences in 42 comparisons.

Question two asked how work values and job satisfaction were related to ethnicity, gender, professional experience, and level of education. When Black and Hispanic LDP candidates were compared on work work values they did not appear to differ. The male and female minority candidates also appeared to differ very little on work values, with females being more satisfied with Ability Utilization in their current job.

Years of professional experience did not appear to bear any significant relationship to work values for the minority leadership candidates studied. If there were a relationship, it might be that those with more experience tended to

value Advancement, and Social Service and be more satisfied with Aesthetic in their work. Level of education also did not appear to be related to work values held by the minority leadership candidates. If any relationship does exist, it may be that those with more education valued Responsibility and Social Service.

The third question concerned the relationship between each work value and each MSQ scale score. The correlational results for the VS and MSQ revealed that there were certain scales that were related to job satisfaction and certain satisfactions that appear to be more predictable using the VS. Cross-validation yielded 15 work values/satisfaction relationship which occured in both FYF and SYF samples.

The final question sought to determine the combinations of work values and demographic variables that accounted for the maximum variance in job satisfaction. The R^2 for the restricted models ranged from .37 (Autonomy) to .61 (Recognition). The restricted models contained between 2 and 12 variables.

The multiple regression stepdown method revealed that there were eight unique important factors related to job satisfaction. The VS variables that were able to predict satisfaction on five or more of the dependent variables were Achievement, Aesthetics, Autonomy, Economic Rewards, Life Style, Physical Activity, Risk, and Cultural Identity. Of the moderator variables, Gender predicted satisfaction on 10 of the dependent variables, while Professional Experience predicted satisfaction on five of the dependent variables.

Based on the results of the multiple regression analysis, the VS appears to measure work values that are related to the job satisfaction of potential minority leaders.

Discussion

The leadership profiles of community colleges do not include enough Black and Hispanic administrators to reflect large percentages of minority students enrolled in community colleges. The present study focused on potential minority administrators in community colleges in Texas.

Leadership development programs have helped make it possible for minorities to enter or advance in administrative positions. While these programs have selected potential minority administrators with respect to administrative ability, the characteristics of trainees have not been scientifically studies in most intervention programs. Little is known about the people who apply to leadership programs, and especially about the people who are ultimately accepted into the programs.

The development of norms for Black and Hispanic administrators with respect to work values and job satisfaction would also be valuable. While there has been much written on work values and job satisfaction generally, there has been less written on the work values and job satisfaction of minorities in professional occupations. For the purposes of career counseling, counselors as well as clients will be benefit when career assessment instruments report norms based on minority values, interests, and needs.

Two general conclusions can be extrapolated from the study. First, to the extent that work values and job satisfaction are important characteristics of potential minority leaders, it appears that programs of leadership development in community college settings need not be structured differently for participants because of their minority status (Black or Hispanic) or gender. Only one of 21 differences in means for the ethnic comparisons was statistically significant, and the gender comparisons yielded few significant differences.

Second, the leadership development program, at least at this institution, does employ a selection process that seems to be sensitive to differences between the pool of applicants who are conceivably less satisfied, and potentially more achievement motivated than those not selected for leadership training. Both the FYF and SYF held lower job satisfaction compared to the norm for employed non-disabled adult means. The profile of findings seems to support this conclusion, both groups of fellows expressed greater valuing of advancement. Such persons have a profile suggestive of achievement and professional development.

A profile of potential future minority leaders relative to national norming also emerges from the present study. As suggested by the "+" signs in Tables 1 and 2, the 59 Fellows appear to value Advancement, Altruism, Authority, and Creativity, Personal Development, as well as be more satisfied with Activity, and Social Services aspects of work than the norm population. The values scores suggest a high-achievement profile and indicate

that the minority individuals studied are less satisfied relative to other workers, but are apparently seeking advancement because of their values, rather than due to unhappiness.

The VS and MSQ both appear to be sufficiently reliable and valid to recommend their use in further research with potential minority leaders in community college settings. It is also recommended that additional studies of this nature be undertaken to increase the body of knowledge on this topic.

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Table 1
Means and Standard Deviations on the Values Scale for Total Sample and Participation Status

			Participation[a]			
	Total(N=59)		FYF(N=36)		SYF(N=23)	
Variable	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
Ability Utilization	54.2	8.2	53.4	9.2	55.3	6.3
Achievement	54.3	8.6	53.2	9.8	55.8	6.4
Advancement	56.1+	8.3	55.5	8.4	57.1	8.2
Aesthetics	54.9	9.3	55.1	8.7	54.6	9.9
Altruism	55.4+	7.4	54.7	7.3	56.3	7.5
Authority	55.9+	8.4	56.0	8.3	55.5	8.7
Autonomy	52.9	8.1	51.1	8.1	55.6*	7.5
Creativity	55.6+	8.1	55.4	8.7	55.8	7.3
Economic Rewards	52.6	9.8	52.5	9.3	51.7	10.8
Life Style	51.7	8.4	55.6	8.2	53.3	8.5
Personal Development	55.2+	9.1	56.0	9.6	54.0	8.4
Physical Activity	52.1	9.0	50.5	8.2	54.6	9.8
Prestige	52.0	10.0	52.9	10.3	50.5	9.5
Risk	50.7	9.0	52.9	8.2	48.4	9.8
Social Interaction	52.5	7.8	52.9	7.8	51.9	8.0
Social Relations	48.1	9.1	46.6	9.3	50.3	8.5
Variety	52.1	8.2	51.5	8.1	52.9	8.6
Working Conditions	53.8	7.8	53.6	8.7	54.0	5.8
Cultural Identity	54.2	8.7	54.1	8.2	54.4	9.6
Physical Prowess	50.4	7.3	49.0	7.1	52.6	7.3
Economic Security	54.6	7.3	54.8	7.4	54.3	7.3

[a]FYF=First Year Fellows, SYF=Second Year Fellows
+ = Differences from adult means greater than .5 standard deviation (T > 55).
Note. Significance level is designated for: * $p < .05$, two-tailed. When a significant difference is noted, the asterisk is placed after the larger mean.

Table 2
Means and Standard Deviations on the Minnesota Satisfaction Questionnaire for Total Sample and Participation Status

	Total (N=59)		Participation[a] FYF (N=36)		SYF (N=23)	
Variable	X	SD	X	SD	X	SD
Ability Utilization	18.9	5.1	19.4	4.3	18.1	5.5
Achievement	20.8	3.2	20.4	3.2	21.4	3.1
Activity	21.6+	6.8	20.9	2.2	22.7	10.7
Advancement	13.1	5.1	14.0*	5.2	11.4	4.4
Authority	18.6	3.4	14.0	5.2	18.1	3.0
Comp Pol & Practices	15.4	4.7	15.6	4.5	15.1	4.9
Compensation	15.9	4.6	16.2	4.8	15.4	4.2
Co-Workers	19.0	3.4	16.2	4.8	18.1	3.5
Creativity	18.8	4.0	18.7	4.0	18.8	4.2
Independence	19.5	2.8	18.8	2.9	19.7	2.5
Moral Values	21.6	2.7	21.6	2.7	21.5	2.6
Recognition	16.7	4.6	16.8	4.5	16.4	4.9
Responsibility	19.4	3.3	19.8	3.0	18.9	3.6
Security	18.9	3.8	19.4	3.2	18.1	4.4
Social Service	21.7+	3.2	21.6	2.7	21.8	3.8
Social Status	18.6	3.4	18.7	3.7	18.4	2.9
Sup--Human Relations	16.9	5.4	17.3	4.8	16.2	6.1
Sup--Technical	16.7	4.8	17.3	4.3	15.7	5.4
Variety	19.2	3.4	19.4	3.4	18.7	4.2
Working Conditions	18.6	5.5	19.0	5.2	17.8	5.8
MSQ[b]	73.7	10.0	74.9	9.5	71.9	10.1

[a]FYF = First Year Fellows, SYF = Second Year Fellows
[b]Mean for MSQ total general satisfaction for employed non-disabled adults is 77.86.
+ = Differences between mean for total group and 50%ile for norms for employed non-disabled adult means greater than .5 standard deviation.
Note. Significance level is designated for: * $p < .05$, two-tailed. When a significant difference is noted, the asterisk is placed after the larger mean.

Table 3
Means and Standard Deviations for Ethnicity and Gender, and Correlations for Professional Experience and Level of Education on the Values Scale (N=59)

	Ethnicity[a]		Gender[a]		Professional Experience	Level of Education
Variable	H (N=27)	B (N=32)	F (N=37)	M (N=22)	r	r
AU	55.3 (6.0)	53.3 (9.7)	54.8 (7.8)	53.2 (8.9)	.09	-.03
Ach	55.7 (7.1)	53.0 (9.7)	55.0 (7.4)	53.0 (10.4)	.21	-.01
Adv	57.0 (7.6)	55.4 (8.9)	58.1* (6.3)	52.8 (10.1)	.11	.22
Aes	55.3 (10.0)	54.6 (8.8)	54.9 (9.2)	54.9 (9.7)	.30*	-.01
Alt	55.7 (6.8)	55.1 (7.9)	56.9 (6.4)	52.8 (8.1)	.13	-.05
Ath	57.8 (7.9)	54.2 (8.5)	57.2 (8.8)	53.6 (7.2)	-.03	.08
Aut	53.6 (7.3)	52.3 (8.8)	54.6* (7.5)	49.9 (8.5)	.04	.09
Cre	56.5 (7.1)	54.8 (8.9)	57.2 (7.3)	52.9 (8.7)	-.05	.01
Eco	52.5 (9.2)	52.8 (10.5)	55.0 (8.5)	48.5 (10.7)	.24	.25
Lif	53.0 (8.0)	50.6 (8.6)	53.6 (8.5)	48.5 (7.2)	-.07	.05
Per	56.6 (6.5)	54.1 (10.9)	56.5 (9.0)	53.0 (9.1)	-.15	-.01
Phy	52.9 (9.6)	51.5 (8.5)	51.1 (8.8)	53.8 (9.2)	.06	.14
Pre	53.3 (9.2)	50.8 (10.7)	54.3 (9.2)	48.0 (10.3)	.03	.21
Ris	52.7 (10.0)	49.0 (7.8)	51.3 (9.0)	49.7 (9.1)	-.04	.04
SoI	54.3 (8.1)	51.1 (7.4)	53.1 (7.3)	51.6 (8.7)	-.09	-.04
SoR	49.0 (9.3)	47.3 (9.1)	48.7 (10.1)	47.1 (7.2)	.04	.07
Var	53.4 (6.6)	50.9 (9.4)	52.8 (7.5)	50.9 (9.4)	-.16	-.06
WoC	53.3 (9.1)	54.2 (8.4)	55.1 (8.0)	51.5 (7.1)	.01	.06
Cul	53.2 (9.1)	55.1 (8.4)	54.7 (7.5)	53.5 (10.5)	-.01	.02
Phy	50.8 (8.8)	50.1 (5.9)	50.4 (7.0)	50.5 (7.9)	.10	.19
Eco	55.3 (6.2)	54.1 (8.2)	54.1 (6.9)	55.3 (8.0)	.15	-.09

[a]Means are top numbers; standard deviations are in parenthesis.
* $p < .05$, two-tailed.

Table 4
Means and Standard Deviations for Ethnicity and Gender, and Correlations for Professional Experience and Level of Education on the Minnesota Satisfaction Questionnaire (N=59)

Variable	Ethnicity[a]		Gender[a]		Professional Experience	Level of Education
	H (N=27)	B (N=32)	F (N=37)	M (N=22)	r	r
Abi	18.4 (5.4)	19.4 (4.9)	20.5** (4.2)	16.3 (5.6)	-.19	-.16
Ach	21.0 (3.1)	20.7 (3.4)	21.5 (2.9)	19.8 (3.5)	-.10	-.20
Act	23.0 (9.8)	20.5 (2.2)	21.2 (2.3)	22.4 (10.9)	-.11	-.06
Adv	13.4 (5.5)	12.5 (4.7)	13.8 (5.2)	11.8 (4.6)	-.35**	-.08
Ath	18.6 (3.9)	18.6 (3.0)	18.9 (3.4)	18.2 (3.4)	-.02	-.20
CPP	15.1 (5.0)	15.8 (4.4)	16.0 (4.6)	14.5 (4.7)	-.19	-.03
Com	16.6 (4.9)	15.3 (4.4)	15.6 (5.0)	16.4* (3.9)	-.06	.02
CoW	18.4 (3.8)	19.5 (3.1)	19.5 (3.4)	18.0 (3.4)	-.10	.05
Cre	18.9 (4.1)	18.7 (4.1)	19.4 (3.7)	17.8 (4.6)	-.14	-.22
Ind	18.9 (2.9)	19.4 (2.7)	19.4 (2.8)	18.9 (2.8)	.04	-.06
MoV	21.6 (3.1)	21.6 (2.3)	22.1 (2.3)	20.7 (3.0)	-.13	-.14
Rec	16.5 (4.7)	16.8 (4.7)	17.8* (4.5)	14.8 (4.4)	-.21	.06
Res	20.0 (3.1)	19.0 (3.4)	20.0 (3.2)	18.5 (3.0)	-.17	-.29*
Sec	18.4 (4.4)	19.3 (3.2)	19.5 (3.1)	17.8 (4.5)	.04	-.15
SSe	21.7 (3.0)	21.7 (3.3)	22.1 (2.5)	20.9 (4.0)	-.28*	-.31*
SSt	18.4 (3.9)	18.7 (3.0)	18.9 (3.6)	18.1 (3.2)	.12	-.14
SHR	16.3 (5.3)	17.5 (5.5)	17.1 (5.6)	16.6 (5.1)	-.13	-.08
SuT	16.4 (4.8)	17.0 (4.8)	17.2 (4.9)	16.2 (4.6)	-.18	-.01
Var	20.0 (3.5)	18.5 (3.8)	19.3 (4.0)	18.9 (3.4)	-.25	-.20
WoC	16.9 (6.0)	20.0* (4.6)	19.1 (5.1)	17.7 (6.0)	-.01	-.06
MSQ[b]	73.5 (9.5)	73.9 (10.5)	75.6 (9.9)	70.6 (9.7)	-.17	-.17

[a]Means are top numbers; standard deviations are in parentheses.
[b]Mean for MSQ total general comparisons.
* $p < .05$, two-tailed. ** $P < .01$, two-tailed.

Table 5
Correlations between the Values Scale and Minnesota Satisfaction Questionnaire

MSQ		Values Scale								
		AU	Ach	Act	Adv	Aut	CPP	Com	CoW	Cre
	Med r[a]	.12	.15	.05	.01	.04	.07	.06	.11	.03
AU	.09	--	*	--	--	--	--	--	--	--
Ach	.04	--	--	--	--	--	--	--	--	--
Adv	.06	--	--	--	--	--	--	--	***	--
Aes	.19	--	--	--	--	--	--	--	--	--
Alt	.05	--	--	--	--	--	--	--	--	--
Ath	.17	--	***	--	--	--	--	*	--	--
Aut	.04	--	***	--	--	--	--	--	--	--
Cre	.03	*	--	*	--	--	--	--	--	--
ER	.10	**	--	*	--	--	--	--	--	--
LS	.12	--	--	--	--	--	--	--	--	--
PD	.03	--	--	--	***	--	--	--	--	--
PA	.10	--	--	--	--	--	--	--	--	--
Pre	.04	--	--	--	--	--	--	--	--	--
Ris	.10	--	--	--	--	--	--	--	--	--
SI	.02	--	--	--	**	--	--	--	--	--
SR	.08	--	--	--	--	--	--	--	--	--
Var	.04	--	--	--	--	--	--	***	--	--
WC	.05	--	--	--	--	--	--	--	--	--
CI	.08	***	--	--	--	--	--	--	--	--
PP	.03	--	--	--	--	--	--	--	--	--
ES	.06	--	--	--	--	--	--	--	--	--
Total Hits		3/1	3/2	2/0	2/1	0	0	2/1	1/1	0

[a] = Median r computed for total sample of 59 cases
* = Significant at .10 for First Year Fellows - N=36 (r=.27)
** = Significant at .10 for Second Year Fellows - N=23 (r=.34)
*** = Significant at .10 for First and Second Year Fellows
-- = No significant relationship

Table 5 (continued).

MSQ	Values Scale											Total Hits
	Ind	MV	Rec	Res	Sec	SSe	SSt	SHR	ST	Var	WC	
	.13	.15	.06	.04	.03	.11	.08	.10	.06	.08	.03	
AU	--	--	--	--	--	--	--	--	--	--	--	1/0
Ach	--	--	--	***	--	--	--	--	--	--	--	1/1
Adv	--	--	--	--	--	--	--	--	--	--	--	1/1
Aes	--	***	--	--	--	--	--	--	--	--	--	1/1
Alt	--	--	--	--	--	--	--	--	--	--	--	0
Ath	--	--	--	--	--	--	--	*	***	--	--	4/2
Aut	--	--	--	--	--	--	--	***	--	--	--	2/2
Cre	--	--	--	--	--	--	--	--	--	--	--	2/2
ER	--	***	--	--	--	--	--	--	--	--	--	3/1
LS	--	--	--	--	--	--	--	--	--	--	--	0
PD	***	--	***	--	--	--	--	--	--	--	--	3/3
PA	--	--	--	--	--	--	--	--	--	--	--	0
Pre	--	--	--	--	--	--	--	--	**	--	--	1/0
Ris	--	--	--	--	--	--	--	--	--	--	--	0
SI	--	--	--	--	--	--	--	--	--	--	--	1/0
SR	--	--	--	--	--	--	--	--	--	--	--	0
Var	--	--	--	--	--	--	--	--	--	--	--	1/1
WC	--	--	--	--	--	--	--	--	--	--	--	0
CI	--	***	***	--	--	--	--	--	--	--	--	3/3
PP	--	--	--	--	--	--	--	--	--	--	--	0
ES	--	--	--	--	--	--	--	--	--	--	--	0
	1/1	3/3	2/2	1/1	0	0	0	2/1	2/1	0	0	

* = Significant at .10 for First Year Fellows - N=36 (r=.27)
** = Significant at .10 for Second Year Fellows - N=23 (r=.34)
*** = Significant at .10 for First and Second Year Fellows
-- = No significant relationship

Table 6
Multiple Regression for Full 26 Variable Model and Dependent Variables (N=59)

	Dependent Variables								
Independent Variables	AU	Ach	Act	Adv	Aut	CPP	Com	CoW	Cre
Ability Util									
Achievement		*	**						*
Advancement									
Aesthetics		**	**			*			
Altruism			*						
Authority							**		
Autonomy	**				*			*	
Creativity	**	.	**						
Economic Rew				**					
Life Style			.	**					
Personal Dev					*			**	
Physical Act						*	*		.
Prestige		*							
Risk	*	**							
Social Int				.					
Social Rel					*				
Variety									
Working Cond					*			*	
Cultural Id		.	*						
Phy Prowess			**				*	*	
Economic Sec						*			
Ethnicity			**				*		
Gender	**	*		.				*	
Pro Exp		*				*			
Level Ed									
R^2 Full	.55	.50	.60	.51	.37	.49	.49	.43	.44
Sig R^2 Full	.14	.26	.04	.22	.77	.29	.30	.53	.49
R^2 Restricted	.34	.38	.42	.42	.16	.19	.24	.24	.12
k variables	4	8	9	5	4	4	4	4	2
Sig R^2 Restricted	.01	.01	.01	.01	.01	.01	.01	.01	.01

. Regression coefficient significant at .10
* Regression coefficient significant at .05
** Regression coefficient significant at .01

Table 6 (continued).

Ind. Var's.	Dependent Variables											
	Ind	MV	Rec	Res	Sec	SSe	SSt	SHR	ST	Var	WC	<.10
AU	**										.	2
Ach	**	**	**							**		7
Adv	*					**						2
Aes			**	*	**		**	*	.		**	10
Alt			*					*	*			4
Ath					.							2
Aut		**			**	**					**	7
Cre												3
ER	**		**	**	**			**	**			7
LS		**		*			*					5
PD					*							3
PA				*	**							7
Pre		*	.				**				*	4
Ris			**		**		**	.				5
SI			.									2
SR											**	2
Var			*			*						2
WC	*											3
CI	**		**	*								5
PP					.					*		4
ES						.						2
E	*										**	4
G		**	**	.		.		*	*			10
PE			**							*	.	5
LE			*			**						2
	.56	.55	.61	.50	.48	.56	.42	.40	.39	.43	.52	
	.09	.08	.03	.27	.34	.10	.58	.66	.70	.55	.20	
	.41	.31	.53	.30	.38	.39	.28	.24	.18	.23	.37	
	7	5	12	6	8	6	4	5	4	3	7	
	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	

. Regression coefficient significant at .10
* Regression coefficient significant at .05
** Regression coefficient significant at .01

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